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The Formal-Informal, Indoor-Outdoor, Expensive-Inexpensive, and Accessible-Inaccessible Recreational Patterns of the Mentally Retarded

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American Alliance for Health, Physical Education, Recreation and Dance/Information Research Utilization Center Reprint Services #766, (1979) - Available at 1201 16th Street, N.W., Washington, D.C. 20036

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EC142167

Abstract

This study compared the frequency of the mentally retarded and the nonretarded in formal-informal, indoor-outdoor, expensive-inexpensive, and accessible-inaccessible recreational activities. One hundred-eight elementary aged boys and girls from a school district in central Pennsylvania were studied using groups of 36. Group I consisted of lower socioeconomic status (SES) mentally retarded children. Group II was comprised of lower SES nonretarded children. Group III was made up of middle SES nonretarded children. Four separate Analysis of Variance for Repeated Measures (ANOVR) of the results obtained from interviewing female caretakers of these children disclosed that the mentally retarded were similar to the nonretarded. Both participated significantly (.05 level) more in informal activities than formal activities, outdoor activities more than indoor activities, inexpensive activities more than expensive activities, and accessible activities more than inaccessible activities. Of the four comparisons the only significant differerce attributed to to mental retardation that was found was for formal recreational activities. The mentally retarded engaged in fewer formal activities than either nonretarded group. It could not be concluded whether significant differences between Group I and III in indoor-outdoor, expensive-inexpensive, and accessible-inaccessible recreational activities were attributed to mental retardation or lower SES.

This article was based on the author's doctoral dissertation at The Pennsylvania State University.

The Formal-Informal, Indoor-Outdoor, Expensive-Inexpensive, and Accessible-Inaccessible Recreational Patterns of the Mentally Retarded

Recreational activities can be viewed many different ways. Matthews (1978), after reviewing numerous studies, has suggested 16 different ways using physical, social, cognitive and environment-related recreation with oneself or family, friends or others, in the home or neighborhood, and the community. Activities can also be viewed as being formal or informal, indoor or outdoor, expensive or inexpensive, and accessible or inaccessible. A review of the literature, however, showed that these four additional ways of looking at recreational activities were usually neglected in recreational studies. The only exception involved formal recreation. This was especially true for studies dealing with the mentally retarded. The emphasis on formal recreation and the omission of other types of recreation can be attributed, at least in part, to the demands of groups like the National Association for Retarded Citizens (Recreation Handbook for State and Local Unit Recreation Committees, 1973), American Alliance for Health, Physical Education and Recreation, the American Association on Mental Deficiency, the National Therapeutic Recreation Society, and the Joseph P. Kennedy, Jr. Foundation (Witt, 1971), for equal formal community recreational opportunities for the mentally retarded.

The purpose of this study was to compare lower socioeconomic status (SES) mentally retarded, lower SES nonretarded, and middle SES nonretarded children in formal-informal, indoor-outdoor, expensive-inexpensive, and accessible-inaccessible recreational activities. It was hypothesized that there would be no significant differences among mildly mentally retarded children whose household head was of a lower SES (occupational) level, nonretarded children whose household head was at a lower SES (occupational) level, and nonretarded children whose household head was at a middle SES (occupational) level with regard to the frequency of their participation in formal-informal, indoor-outdoor, expensive-inexpensive, and accessible-inaccessible recreational activities.

Method

Personnel. Personnel used in this study consisted of children, caretakers, and interviewers. Three groups of 36 elementary aged children from the same school district in central Pennsylvania that were stratified for age and sex were randomly selected to be studied. Group I was made up of lower SES mentally retarded children. Group II consisted of lower SES nonretarded children. Group III was comprised of middle SES nonretarded children. Mental retardation was determined if a child was enrolled in a special education class for the educable mentally retarded. Socioeconomic status was governed by the Hollingshead Two Factor Index of Social Position

(Hollingshead, 1957). Occupational levels 6 and 7 were considered lower class while 3 and 4 denoted middle class. Caretakers were mothers or female guardians of the children described above. Caretakers were randomly interviewed in person by trained college students, who exceeded 90 percent interrater agreement, using the questionnaire described below. A follow-up meeting with the interviewers was held after they completed one interview. All interviews were completed in 29 days.

Procedure. Forty-eight recreational activities that were suitable for elementary age children in the geographical area under study, that were appropriate for both boys and girls, and that equally encompassed the 16 different ways of viewing recreational activities mentioned in the introduction were selected. In order to categorize each of the 48 activities on the questionnaire as formal-informal, indoor-outdoor, expensive-inexpensive, and accessible-inaccessible, the activities were rated by four judges who were given definitions of the eight terms. Those yielding 75 percent or higher agreement were used for this analysis. Specifically, the 48 activities could be considered formal (recreation at a specific time and place in the presence of a paid or volunteer adult supervisor(s) who was not a friend or relative) or informal (recreation that was not formal). Forty-one activities were rated as formal-informal; seven could not be reliably categorized. Similarly, the 48 activities could be considered as

taking place indoors (recreation that takes place in the interior of a facility) or outdoors (recreation that was not conducted indoors). Forty-three activities were rated as indoor-outdoor. Thirty-nine expensive (recreation that costs more than one dollar)-inexpensive (recreation for which there was no charge or a minimal charge under one dollar) activities were found. In addition, 42 accessible (recreation that was void of all architectual, participation, and transportation barriers)-inaccessible (recreation with architectual, participation, or transportation barriers) recreational activities were disclosed.

Results

The mean frequency for participation in formal-informal, indoor-outdoor, expensive-inexpensive, accessible-inaccessible recreational activities for each subject was computed. The means and standard deviations for each of the three groups appears in Table 1. This data was then subjected to four Analysis of Variance for Repeated Measures (ANOVR), (Winer, 1962).

Table 1

Summary Table of Means and Standard Deviations of Three Groups on Formal-Informal, Indoor-Outdoor, Expensive-Inexpensive, Accessible-Inaccessible Recreational Activities

	Formal	Informal	Indoor	Outdoor	Expensive	Inexpensive	Accessible	Inaccessible
Group I (lower SES mentally retarded)								
Mean	1.20	1.87	1.57	1.73	1.21	2.01	1.98	0.16
St. Dev.	1.88	2.21	2.05	2.14	1.38	2.58	2.41	0.20
Group II (lower SES nonretarded)								
Mean	1.42	2.02	1.75	1.85	1.44	2.13	2.12	0.20
St. Dev.	1.00	2.18	1.76	1.73	1.08	2.35	2.33	0.20
Group III (middle SES nonretarded)								
Mean	1.73	2.06	1.87	1.97	1.48	2.21	2.16	0.23
St. Dev.	1.00	2.30	1.76	1.95	1.15	2.54	2.48	0.20

An ANOVR was performed on the appropriate data in Table 1, (See Table 2), for formal-informal recreational activities. The assumption of homogeneous variances and covariances between repeated measures was violated. A significant (.05 with conservative adjustment of the degree of freedom) group by formal-informal interaction was found. This interaction (See Figure 1) precluded an analysis of main effects. Therefore, an analysis of simple within effects was performed. Individual variances and covariances were used to compare formal and informal activities within each group. For Groups I, II and III, children participated in informal activities significantly more frequently than formal activities ($F_{1.34}$ = 69.31, 76.03, and 16.53 respectively for Group I, II and III). All simple between effects for formal activities among groups were significant (for Group I = II, $q_{r\ 2,103}$ =2.94, for Group I = III, $q_{r\ 2,103}$ = 7.08, and for Group II = III, $q_{r\ 2,103}$ =4.15). For informal activities, the three gorups did not differ significantly (for Group I = II, $q_{r\ 2,103}$ = 2.01, for Group I = III, $q_{r\ 2,103}$ = 2.50, and for Group II = III, $q_{r\ 2,103}$ = .49).

An ANOVR was performed on the appropriate data in Table 1 for indoor-outdoor, expensive-inexpensive, and accessible-inaccessible (See Table 3), recreational activities. The by groups interaction for indoor-outdoor,

Table 2

Formal - Informal Recreational Activities By Groups

Source of Variation	SS	df	MS	F	P
Between Subjects					
Groups	4.59	2	2.29	7.88	0.00
Error	30.57	105	0.29		
Within Subjects					
Formal-Informal	15.73	1	15.73	145.49	0.00
F-I by Groups	1.18	2	0.59	5.44	0.01
Error	11.35	105	0.11		

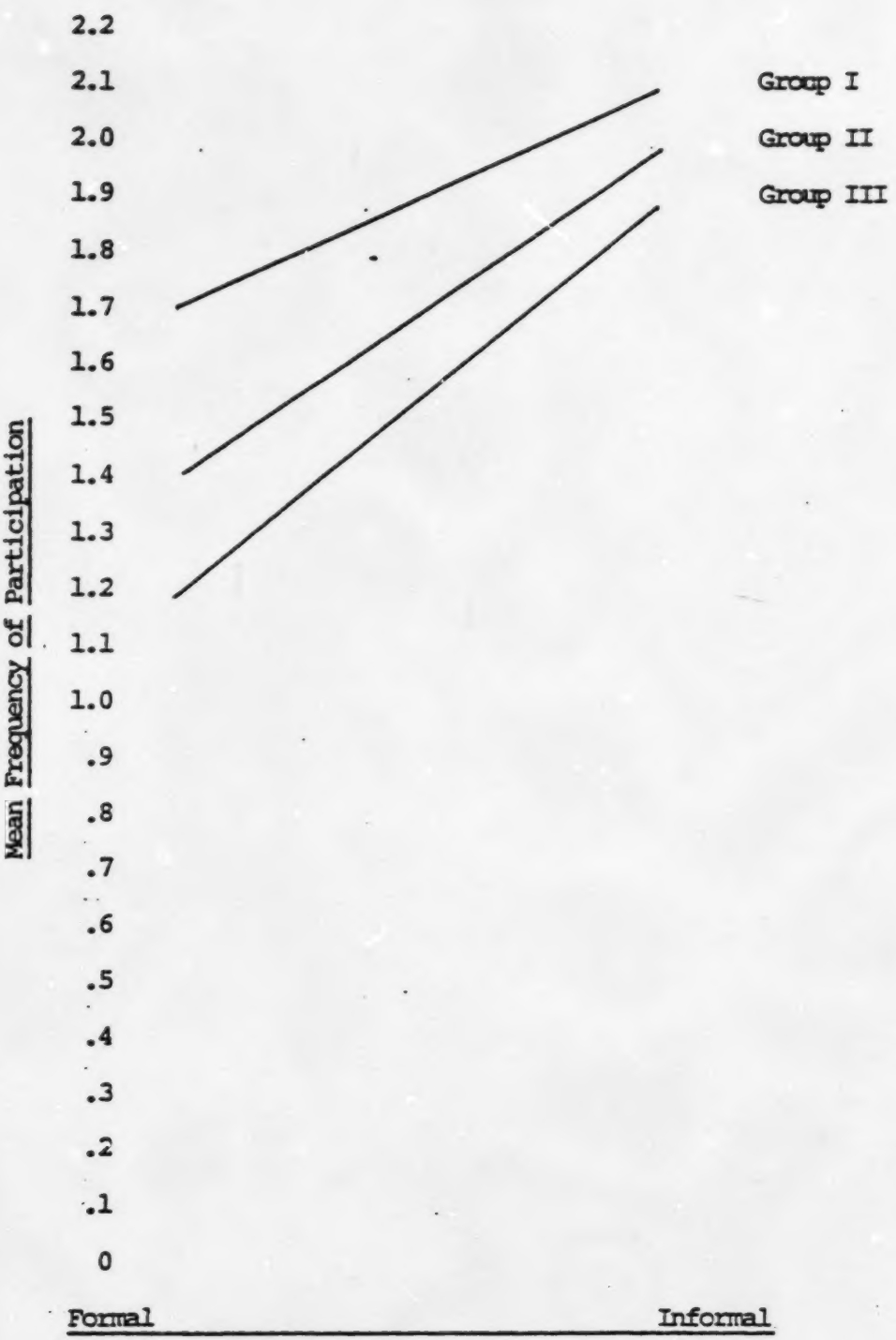

Figure 1

Groups by Formal-Informal Interaction

Table 3

Indoor-Outdoor (I-O), Expensive-Inexpensive (E-I),

Accessible-Inaccessible (A-I) Recreational Activities

by Groups

Source of Variation	SS	df	MS	F	P
Between Subjects					
Groups (I-O)	2.54	2	1.27	6.37	0.00
Error	20.90	105	0.20		
Groups (E-I)	2.10	2	1.05	5.32	0.01
Error	20.69	105	0.20		
Groups (A-I)	0.59	2	0.29	4.44	0.01
Error	6.98	105	.07		
Within Subjects					
I-O	0.79	1	0.79	11.04	0.00
I-O by Groups	.05	2	.02	0.34	0.71
Error	7.52	105	.07		
E-I	29.69	1	29.69	436.90	0.00
E-I by Groups	0.13	2	.07	0.20	0.38
Error	7.13	105	.07		
A-I	191.97	1	191.97	3592.65	0.00
A-I by Group	0.15	2	.07	1.38	0.26
Error	5.61	105	.05		

expensive-inexpensive, and accessible-inaccessible recreational activities was not significant ($F_{2,105}$ = 0.34, 0.20, and 1.38 respectively). Therefore, the main effects were examined. All main effects for groups were significant. To locate which means differed significantly, the Tukey HSD procedure was used to make all possible mean comparisons. Group III engaged in indoor-outdoor, expensive-inexpensive, and accessible-inaccessible activities significantly more often than Group I ($q_{r\ 1,105}$ = 3.56, 3.13, 2.89, respectively). The significant main effect for indoor-outdoor, expensive-inexpensive, accessible-inaccessible activities indicated that outdoor activities, inexpensive activities and accessible activities were participated in more often than indoor, expensive, and inaccessible activities.

Discussion

Both similarities and differences were found between the retarded and nonretarded. The mentally retarded and the nonretarded were just as likely to engage in informal activities. All three groups participated in informal activities significantly more than formal activities, outdoor activities significantly more than indoor activities, inexpensive activities significantly more than expensive activities, and accessible activities significantly more than inaccessible activities. It might seem obvious that children spend more time in

informal than formal activities, more time in outdoor than indoor activities, more time in inexpensive than expensive activities, and more time in accessible than inaccessible activities. However, no empirical study reported this to be the case.

All three groups differed significantly in their participation in formal recreational activities. Mentally retarded lower SES children engaged in fewer formal recreational activities than lower SES children, who in turn engaged in fewer formal activities than middle SES children. Mentally retarded children perferred informal activities while nonretarded children, especially middle SES children, perferred formal activities to informal activities. More formal activities may be available to the nonretarded than to the retarded.

Group I was significantly different form Group III in terms of indoor-outdoor, expensive-inexpensive, and accessible-inaccessible activities. In each case lower SES mentally retarded children engaged in these types of activities significantly less often than middle SES children. These differences were attributed to both mental retardation and lower SES. Apparently, the children of middle SES can use indoor facilities, have more money to spend on recreation and can get to inaccessible recreation more frequently than lower SES mentally retarded. Lack of finance and knowledge may force the lower SES mentally retarded essentially to limit their recreation to outdoor, inexpensive, and accessible settings.

In conclusion, the formal-informal, indoor-outdoor, expensive-inexpensive, accessible-inaccessible recreational patterns of the mentally retarded are quite similiar to those of the nonretarded. The only difference that was linked to mental retardation was for formal recreation. Other differences were a function of not just mental retardation but of SES.

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